OFT- 10 ((Home Science))
Rabi 2023

- **Thematic area: Value addition**
- **Problem definition/Name of OFT:** Spoilage of mushroom due to poor shelf life

i.	**Title of OFT**	**Assessment of different treatment preservation methods on preparation of oyster mushroom powder for enhancing the shelf-life.**		
ii.	**Problem diagnose**	Spoilage of mushroom due to poor shelf life.		
iii.	**Details of technology selected for assessment/refinement**	**FP**	Drying & Powdering of mushroom without any treatment.	
		TO_1	Drying & Powdering of mushroom by pre-treating with 0.5% citric acid.	
		TO_2	Drying & Powdering of mushroom by pre-treating with 1% KMS	
iv.	**Source of technology**	DRPCAU, Pusa		
v.	**Production system and thematic area**	Value addition		
vi.	**Performance of technology with performance indicator**	**Technical Indicator :** ➢ Organoleptic evaluation • Taste • Clour • Shelf-life	**Economic Indicator:** ➢ Benefit Cost Ratio	

Table.1 Assessment of different treatment preservation methods on preparation of oyster mushroom powder for enhancing the shelf-life after 6 months

Technological options	No. of trials	Shelf Life (Days)	Colour	Texture	Taste
FP: Drying & Powdering of mushroom without any treatment.	10	94	Dull	Semi soft	Average
TO_1: Drying & Powdering of mushroom by pre-treating with 0.5% citric acid.	10	131	Good	Soft	Good
TO_2: Drying & Powdering of mushroom by pre-treating with 1% KMS	10	163	Very Good	Soft	Very Good

Result compared at 5-point hedonic scale: Dislike extremely (1), Dislike slightly (2), Neither like nor dislike (3), Like Slightly (4), Like extremely (5)

Table 2 Economics of preparing oyster mushroom powder prepared through different treatment methods

The trial was conducted in helta, kubbatoli and bendi village. The farm women were grouped into 3 categories that is Farmer's practice, Technology option 1and Technology option 2. The mushroom was blanched for 2 minutes with specified amount of citric acid and KMS respectively, dried for 7 to 10 days and powdered. The powder was kept for 6 months for its quality analysis.

The mushroom powder under TO_2 was found very good in color and taste and the texture of dried mushroom was found soft. So Mushroom powder treated with KMS was having good shelf life and recommended for storing dehydrated mushroom long period.

vii. Final Recommendation at micro level situation:

The mushroom powder under TO2 was found very good in color and taste and the texture of dried mushroom was found soft. So Mushroom powder treated with KMS was having good shelf life and recommended for storing dehydrated mushroom long period.

viii. Constraints identified and feedback for research

Spoilage of mushroom due to poor shelf life.

Technological options	No. of trials	Cost of Preparation (Rs/Kg)	Gross return (Rs/kg)	Net return	B:C ratio
FP: Drying & Powdering of mushroom without any treatment.	10	1000	1200	200	1.20
TO_1: Drying & Powdering of mushroom by pre-treating with 0.5% citric acid.	10	1250	1500	250	1.20
TO_2: Drying & Powdering of mushroom by pre-treating with 1% KMS	10	1250	1550	300	1.20

ix. Process of farmer's participation and their reaction

- Group Meetings with mushroom growers
- Need Assessment
- Problem Diagnosed
- Trail was conducted
- Follow up
- Feedback

B. Results with Tables

Thematic Area: Food Preservation

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